

CLAIMS

What is Claimed is:

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1. A dump truck body comprising:
a receptacle defined by a floor and, extending from the floor, first and second side walls on opposite sides of the floor, and a front wall and a tailgate, located on opposite sides of the floor and extending between the side walls;
the floor comprising at least one longitudinal support structure which substantially extends from the front wall to the tailgate, a substantially planar support plate attached to the at least one longitudinal support structure, and at least one floor section attached to the at least one longitudinal support structure, without a plurality of longitudinally spaced, transverse supports attached to the at least one floor section, the at least one longitudinal support structure, and the substantially planar support plate; and
a conveyor system attached to the at least one longitudinal support structure, the floor having at least one opening in alignment with the conveyor system.
2. The dump truck body according to claim 1 wherein the floor comprises two longitudinal support structures which are transversely spaced and substantially parallel.
3. The dump truck body according to claim 1 wherein a cross-sectional shape of the at least one longitudinal support structure is trapezoidal.
4. The dump truck body according to claim 1 wherein a cross-sectional shape of the at least one longitudinal support structure is triangular.
5. The dump truck body according to claim 1 wherein the at least one longitudinal support structure is an H-beam.

Fig. 11 {
6. The dump truck body according to claim 1 further comprising a transverse ⁸⁵ support attached to the at least one longitudinal support structure and the at least one floor section adjacent the tailgate.

A, 5 7. The dump truck body according to claim 1 further comprising at least one first curved member ⁶⁴ adjacent and in contact with the first side wall and an inner surface of the floor, wherein the at least one first curved member curves downwardly and inwardly toward the conveyor system.

10 8. The dump truck body according to claim 7 further comprising at least one second curved member adjacent and in contact with the second side wall and the inner surface of the floor, wherein the at least one second curved member curves downwardly and inwardly toward the conveyor system.

15 9. The dump truck body according to claim 8 wherein the at least one first and second curved members are removable.

20 10. The dump truck body according to claim 8 wherein the at least one first and second curved members are permanently attached to either or both of the first and second side walls and the floor.

25 11. The dump truck body according to claim 8 wherein the first and second side walls have a first longitudinal edge distal from the floor and a second longitudinal edge proximal to the floor and wherein the at least one first curved member extends from the first longitudinal edge of the first side wall to the floor adjacent the conveyor system and the at least one second curved member extends from the first longitudinal edge of the second side wall to the floor adjacent the conveyor system.

30 12. A dump truck comprising:
~~a longitudinally extending truck frame,~~

a dump truck body pivotally mounted at a rear end thereof on the truck frame, wherein the dump truck body comprises:

a receptacle defined by a floor and, extending from the floor, first and second side walls on opposite sides of the floor, and a front wall and a tailgate, located on opposite sides of the floor and extending between the side walls;

the floor comprising at least one longitudinal support structure which substantially extends from the front wall to the tailgate, a substantially planar support plate attached to the at least one longitudinal support structure, and at least one floor section attached to the at least one longitudinal support structure, without a plurality of longitudinally spaced, transverse supports attached to the at least one floor section, the at least one longitudinal support structure, and the substantially planar support plate; and

a conveyor system attached to the at least one longitudinal support structure, the floor having at least one opening in alignment with the conveyor system; and

a lift system connected between the truck frame and a forward end of the dump body.

13. The dump truck according to claim 12 wherein the floor comprises two longitudinal support structures which are transversely spaced and substantially parallel.

14. The dump truck according to claim 12 wherein a cross-sectional shape of the at least one longitudinal support structure is trapezoidal.

15. The dump truck according to claim 12 wherein a cross-sectional shape of the at least one longitudinal support structure is triangular.

16. The dump truck according to claim 12 wherein the at least one longitudinal support structure is an H-beam.

17. The dump truck according to claim 12 wherein the dump truck body further comprises a transverse support attached to the at least one longitudinal support structure and the at least one floor section adjacent the tailgate.

5 18. The dump truck according to claim 12 wherein the dump truck body further comprises at least one first curved member adjacent and in contact with the first side wall and an inner surface of the floor, wherein the at least one first curved member curves downwardly and inwardly toward the conveyor system.

10 19. The dump truck according to claim 18 wherein the dump truck body further comprises at least one second curved member adjacent and in contact with the second side wall and the inner surface of the floor, wherein the at least one second curved member curves downwardly and inwardly toward the conveyor system.

15 20. The dump truck according to claim 19 wherein the at least one first and second curved members are removable.

20 21. The dump truck according to claim 19 wherein the at least one first and second curved members are permanently attached to either or both of the first and second side walls and the floor.

25 22. The dump truck according to claim 19 wherein the first and second side walls have a first longitudinal edge distal from the floor and a second longitudinal edge proximal to the floor and wherein the at least one first curved member extends from the first longitudinal edge of the first side wall to the floor adjacent the conveyor system and the at least one second curved member extends from the first longitudinal edge of the second side wall to the floor adjacent the conveyor system.

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23. A dump truck body comprising:

a receptacle defined by a floor and, extending from the floor, first and second side walls on opposite sides of the floor, and a front wall and a tailgate, located on opposite sides of the floor and extending between the side walls, wherein
5 the first and second side walls have a first longitudinal edge distal from the floor and a second longitudinal edge proximal to the floor;

a longitudinally extending conveyor system structurally integrated into the floor between the first and second side walls; and

at least one first curved member having a first end adjacent and in
10 contact with the first longitudinal edge of the first side wall and a second end adjacent and in contact with the floor adjacent the longitudinally extending conveyor system, wherein the at least one first curved member curves downwardly and inwardly toward the conveyor system.

24. The dump truck body according to claim 23 further comprising
15 at least one second curved member having a first end adjacent and in contact with the first longitudinal edge of the second side wall and a second end adjacent and in contact with the floor adjacent the longitudinally extending conveyor system, wherein the at least one second curved member curves downwardly and inwardly toward the
20 conveyor system.

25. The dump truck body according to claim 24 wherein the at least one first and second curved members are removable.

26. The dump truck body according to claim 24 wherein the at least one first and second curved members are permanently attached to either or both of the first and second side walls and the floor.

27. A dump truck comprising:

a longitudinally extending truck frame;

a dump truck body pivotally mounted at a rear end thereof on the truck frame, wherein the dump truck body comprises:

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a receptacle defined by a floor and, extending from the floor, first and second side walls on opposite sides of the floor, and a front wall and a tailgate, located on opposite sides of the floor and extending between the side walls, wherein the first and second side walls have a first longitudinal edge distal from the floor and a second longitudinal edge proximal to the floor;

a longitudinally extending conveyor system structurally integrated into the floor between the first and second side walls; and

at least one first curved member having a first end adjacent and in contact with the first longitudinal edge of the first side wall and a second end adjacent and in contact with the floor adjacent the longitudinally extending conveyor system, wherein the at least one first curved member curves downwardly and inwardly toward the conveyor system; and

a lift system connected between the truck frame and a forward end of the dump body.

28. The dump truck according to claim 27 wherein the dump truck body further comprises at least one second curved member having a first end adjacent and in contact with the first longitudinal edge of the second side wall and a second end adjacent and in contact with the floor adjacent the longitudinally extending conveyor system, wherein the at least one second curved member curves downwardly and inwardly toward the conveyor system.

29. The dump truck according to claim 28 wherein the at least one first and second curved members are removable.

30. The dump truck according to claim 28 wherein the at least one first and second curved members are permanently attached to either or both of the first and second side walls and the floor.